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SPECIALTY CROP CONTRACTING
A Primer to Improve Understanding

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Contracting is now an integral part of producing crops and livestock in the U.S. An ever-increasing number of producers and processors are using contracts as a means of reducing risk in their businesses and a means of responding to consumer preferences for consistent quality with desired characteristics. There is rarely a farm product produced in the U.S. that has escaped the trend toward more contracting. Agricultural contracts are not new. Some grocers early in this century, pre-depression, developed organizations to buy fruits and vegetables directly from farmers. Other grocers joined the trend prior to WW II with their own milk processing plants. In other some instances contracts between producers and their cooperatives have been the norm for more than fifty years. Recent interest in GMO's and "designer" crops and livestock has piqued interest in the topic.

The data are elusive and ever-changing, but it is safe to say that more than one-half of the value of U.S. farm production is now produced under some form of contract. A 1993 USDA study put the figure at one-third. The amount of contracting has only increased during the past six years. On one hand, a more recent USDA study suggests 8 percent of farm production is coordinated by vertical integration, another reports 12 percent of selected commodities are produced under production contracts and still another indicates that 22 percent of production is produced under marketing contracts. A multitude of contract types and terms need to be understood before we can fully appreciate what is happening.

Understanding the Terms

Broadly defined agricultural contracts consist of arrangements between producers and contractors whereby they agree on the delivery and acceptance of a specified quantity and quality of a product for a specified price (or price determining mechanism) or fee. The contract usually stipulates who owns the product and when ownership passes, who will provide and pay for inputs and who holds or how the risk of loss is shared. The amount and/or share of control over production and marketing decisions vary with the contract. The contract, as a legal document is enforceable in the courts. It behooves producers to be sure contracts are not one-sided instruments favoring the contractor.

Coordination is an umbrella or inclusive term that serves as the beginning point to define what contracts are. It includes all of the ways that output from one stage of production and distribution is transferred to another stage. But it is more than simple transference. It includes the differing degrees of control accepted and/or exerted by one firm in the production, processing and marketing chain over another firm in the same chain.

The traditional and often mistakenly assumed open production system is typified by a producer independently producing and selling a commodity into a market place where price is determined at the time of sale. The use of the open production/marketing system, although still evidenced to a great degree with major commodities such as grains and oilseeds, has declined significantly. As the consumer has become increasingly sophisticated and demanding and as processing and production technology have permitted a greater degree of product specification and differentiation coordinated production is replacing open production. The term "vertical integration," often used to refer to coordinated, easily enters coffee shop, classroom and boardroom discussions, but is has a more specific meaning and understanding.

Vertical integration, a type of coordination, is more correctly used when referring to a situation where the firm "retains ownership" of a commodity across two or more stages of production. The agricultural community is replete with examples of integrated production. In the strictest sense of the definition the very traditional crop-livestock farm is the simplest, although usually not thought of, example. The livestock farmer that produces and feeds his/her crops to livestock is vertically integrated cross the crop and livestock enterprises. Likewise the dairy, livestock or poultry producer that produces and raises herd replacements or the cow-calf producer that backgrounds or feeds cattle to a finish weight is vertically integrated. Vertical integration can be as simple as changing the form of the product (feed into milk, meat or eggs) or combining stages of production under the control of one business entity (produce feeder pigs and grow and finish hogs).

The more pedestrian perception of vertical integration is usually of a firm that engages in one or more of the production activities of "traditional" production units. The primary historical example here is the poultry business that had a long-standing separation between feed production, meat or egg production and processing and marketing. In today's world the production lines are almost entirely blurred. The usual case being a single firm engaging in all phases of production and marketing - feed mill, hatchery, growing, laying or slaughter, processing, packing and selling. In other situations the firm may only take on two or three of the more traditional stages of production. The livestock sector, including swine and pork, is especially noted for vertically integrated production systems, but it is not exclusive. Specialty crop producers, by the usual definition of fresh fruit and vegetables, another hotbed of vertical integration, have for a long time produced, cleaned, sorted, packaged and sold wholesale and/or retail, some with brand names.

Farmer cooperatives are a prime example of farmers jointly, rather than individually, vertically integrating across the stages of production. Consumers will rapidly recognize the band names of products associated with respected successful farmer-owned vertically integrated cooperatives - Land O'Lakes, Welch, Sunkist, and Ocean Spray. More recently wheat producers in Kansas and North Dakota have formed new vertically integrated cooperatives to enhance producer income. Input supply cooperatives are also part of the vertical integration scene in agriculture where producers have joined together to jointly purchase or in some cases even produce inputs such as fuel and fertilizer.

Incentives for vertical integration can arise anywhere in the product chain, upstream or downstream, whenever or wherever the opportunity for added profit or reduced risk presents itself. Farmers may integrate "downstream" (forward toward the consumer) to capture profit in the processing and marketing or to simply assure themselves of a market. A processor/marketer, on the other may integrate "upstream" (backward toward the producer) to assure quality, quantity, production timing or input use. The incidence, degree and type of vertical integration will largely be a function of management's willingness and ability to successfully finance and manage a new production activity.

Production contracts generally require a producer (farmer) to forgo a greater or lesser amount of his/her prized independence of production, a very difficult task for some producers or community of producers. A production contract generally gives the buyer (contractor) some degree of control over the production process. A contract would typically specify the inputs and management practices to be used, the quality and quantity of commodity to be delivered and the price or price determining mechanism to be used in settling the contract.

Control over timeliness, quality and production method drive firms to contract production with farmers to insure the use of specialized inputs and a rigid complex production system that will ensure product quality and uniformity. Firms that have historically encountered over or under supply problems find production contracts to their advantage, as do those where some centralized management is feasible and products are highly perishable. The Broiler industry is a primary example of production contracts. In 1997 virtually all, 99 percent, of the value of U.S. broiler production was under production contracts, as was one-third of the hog production and 37 percent of egg production.

Table 1. Value Produced Under Production Contracts, 1997

Commodity	Percent of Value Produced
Broilers	99
Cattle	14
Eggs	37
Hogs	33
Vegetables	8
All commodities	12

Source: USDA, ERS, Managing Risk in Farming, March 1999

Two basic types of production contracts are generally in use. They differ by the amount of control, risk and uncertainty each party assumes and are referred to as "production management" and "resource providing" contracts. With a production management contract the buyer gains some control over decisions that would be the sole responsibility of the producer in the absence of the contract and the contractor normally holds all the price risk, while the producer holds the production and quality risk. The resource-providing contract offers more control to the contractor and is used when specialized inputs and management are required to ensure final product attributes desired by consumers and promised by the contractor.

One feature of many production contracts that disturbs some in the farm community is commonly known as the relative performance clause, meaning compensation is linked to performance efficiency as compared to that of other contracting producers. The relative performance clause serves as an incentive, positive and negative, for the producer, encouraging efficient, low cost and consistent quality production. It has also been the bone of contention in numerous lawsuits between growers and integrators.

Marketing contracts are used to set a price or price premium for a commodity before harvest or marketing. Some marketing contracts are signed even before planting if special seed or other inputs are required to fulfill the contract. The producer most often retains ownership and management of the commodity during production with a marketing contract, clearly separating it from a production contract.

Table 2. Value Produced Under Marketing Contracts, 1997

Commodity	Percent of Value
Barley	19
Canola	46
Corn	8
Cotton	33
Dry edible beans	3
Oats	3
Peanuts	41
Peas	9
Rice	31
Sorghum for grain	6
Soybeans	9
Sunflowers	8
All commodities	22

Source: USDA, ERS, Managing Risk in Farming, March 1999

Local conditions and preferences produce a variety of marketing contracts. Typically a marketing contract establishes a price or provides for setting a price at a later date and provides for delivery and acceptance of

a specified quality within a given time period. The price-determining element of the contract can take many forms and provides common names for contracts.

The most common is a "flat" price (fixed price) contract where price is only adjusted by quality considerations at the time of delivery. A second common marketing contract is referred to as a "basis" contract (basis is locked in) where price is determined from a futures contract some time later. Then there are "delayed payment" contracts where the price is fixed and payment is delayed to a specified time and "delayed price" contracts where price is determined at a time to be selected by the producer. Another variation is the "minimum-price" contract that guarantees a minimum price with a formula to permit selling at a higher price if markets move higher before the contract expires. Marketing contract options are diverse and can be complex. Producers need a clear understanding of options and results before signing contracts.

Table 3. Characteristics of Production and Marketing Contracts

Marketing Contract	Production Contract
Contractor	Contractor
Know quantity, quality and price	Arranges for specific quality and quantity
Ownership upon delivery	Owns as being produced
Minimal influence on production	Makes most of production decisions
Producer	Producer
Has buyer and a price	Provides labor, land and buildings for a fee
Supplies most or all inputs	Supplies small part if production inputs
Ownership until delivery	Doesn't own commodity
Makes most of production decisions	Minimal production decisions
Retains production risk	Limited production risks
Reduced price risk	Little price risk
Largest share of production value	Small share of market value

Source: USDA, ERS, Managing Risk in Farming, March 1999

Specialty Crop Contracts: The New Cat on the Block

Traditional usage of the term "Specialty Crop Contract" was generally interpreted in the farm community to mean a production or marketing contract for a vegetable crop such as pickles, tomatoes or sugar beets or a small fruit crop such as raspberries or blueberries. It has taken on a completely new meaning in the context of today's evolving world of "designer crops." Using the term today in the American and global agricultural arena elicits immediate thoughts of genetically modified crops.

Crop producers have used production and marketing contracts for a long time. They are familiar with knowledge of if not the use of forward contracting or hedging a grain crop using marketing contracts. Production contracts are not a new idea and some grain producers have signed production contracts with seed companies and specialty corn buyers for some year. So what's new then.

The newness comes in two forms. First, many more farmers need understand and accept the idea they will be producing something other than "commodity" corn is corn is corn. Second, producers need to understand the idea that the contracted "genetically designed" crop they may be asked to or want to produce has a new dimension of value. That value needs to be understood if the producer is to capture any of the new value being created in the form of a higher or premium price. They also need to understand that

today's confusion of value creation, value sharing and or capturing and the changing control relationships for production, management and marketing is simply a foretaste of what is on the horizon.

Understanding the value being created is critical to understanding what and why today's "designer crops" are being produced and contracted for in a manner different than farmers are used to. Producers need to understand they are being asked to produce something that has increased value in the marketplace. Without an appreciation of the value they are creating, producers are at the mercy of the "contractor." Producers need to arm themselves with as much information about the "new" crop they are producing, as is possible, so they can go to the negotiating table as an equal partner in the bargaining process. There are many examples of today's new generation of specialty crops that were created because of their added value to the livestock feed, industrial use and direct consumption human food markets. Without the added value there would have been no incentive for creation.

Table 4. Specialty Crops With Added Value in the Marketplace *

Animal Feed Value	Human Food Value
High oil corn	High protein wheat
High lysine corn	High gluten wheat
Low phytic acid corn	High amylose corn
High protein corn	White corn
High methionine corn	Hard endosperm corn
High methionine soybeans	Low protein barley
High protein soybeans	Oil engineered canola
High lysine soybeans	High oil sunflowers

* Not an inclusive list

An Example of value creation will illustrate the need for producers to better understand what they are creating in the field to better prepare themselves for the bargaining process. Recognize this is a general analysis only used to illustrate the point. At the same time it is probably close to the reality of the markeplace but recognize the market is still trying to determine the real value of many of the specialty crops. Needless to say a lot of value is being created and much more value will be created in the future. Using high-oil corn will help understand the magnitude of the opportunity and the difficulty of assessing the created value

Table 5. Example of Value Creation Using High-Oil corn

Situation: Feeding high-oil corn and corn silage to dairy cows

Results: Increased production - 4 pounds per cow per day
Increased milk value - 60 cents per cow per day
Increased cost - 25 cents per cow per day

Net increased profit - 35 cents per cow per day
- $100 per cow per year

Determining increased value per bushel

Milk cows in the U.S. - 9 million
Total increased value - $900 million
Acres of corn used per cow - 1

Total acres of corn used - 9 million
Added value per acre - $100
Average yield per acre - 125 bushels
Increased value per bushel - 80 cents

Table 6. Preliminary evidence of value of high oil corn

Use	Value Per Bushel	Percent of Crop Used
Dairy	$0.80	12
Hogs	$0.40	29
Poultry	$0.50	34
Beef	$0.55	25
Average value weighted by use	$0.52	

Corn use in the United States - 5.5 billion bushels of grain per year
- 5.5 million acres of corn silage per year

Total added value of high oil corn -$3.5 billion per year

Present value @5%, 10 years - $27 billion

Table 7. Estimated value added per acre for other products

Crop	Value Per Acre ($)
Corn	
High-oil + high oleic	78
High-oil + high lysine	83
High-oil + High lysine + high methionine	98
Soybeans	
High oleic	28
High lysine	38
High lysine + high oleic	43
High lysine + high methionine	45
High lysine + low saturated fat	48

Who will capture the value created is an important question for contractees (farmers), contractors (buyers and processors) and users (livestock feeders, industrial users and consumers). An efficient economic system is very likely to distribute the added value in accordance with the risks assumed and the costs incurred by the multitude of participants in the production, processing and distribution channel. However, in the early stages of the game, while the market is trying to determine what the real risks and costs, the market is not efficient. In today's market the added value will be captured by those with market power, those armed with preliminary knowledge of values and costs and those with skilled in negotiation and bargaining.

For the most part, these characteristics do not reside with the farmer. It behooves every producer of new generation specialty crops to become as fully aware of the value being created in his/her field, to learn how to read and understand a contract and to join with other producers to create a countervailing powerful position to take to the bargaining table. An uninformed, independent producer who lacks bargaining skill will be at the mercy of the contractor and will leave value on the table that might have otherwise enable the farm to survive into an uncertain future.